AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1.   (Currently Amended) A method of improving transmission efficiency in a mobile communication system with a layered protocol stack, ~~wherein data packets are processed on an upper protocol layer; the processing is controlled according to at least one timer of the upper protocol layer; the data packets are forwarded to a lower protocol layer for transmission, the transmission is controlled by the lower protocol layer and performed on a physical layer~~, the method comprising:

processing data packets on an upper protocol layer;

controlling the processing according to at least one timer provided on an upper protocol layer;

forwarding the data packets to a lower protocol layer for transmission;

controlling the transmission by the lower protocol layer;

transmitting the packet by a physical layer that is different from the lower protocol layer;

initiating a transmission with a variable channel access delay caused by a control procedure of the lower protocol layer;

detecting the start of a transmission by the lower protocol layer;

notifying the upper protocol layer by the lower protocol layer when a transmission is started; and

synchronizing the at least one timer of the upper protocol layer according to the notification.

2.   (Previously Presented) The method of claim 1, wherein the timer models a measure of time selected from the group consisting of a round trip time and a back-off time.

3. – 16.　　(Canceled)

17.　　(Currently Amended) A device in a mobile communication system, ~~the mobile communication system having a layered protocol stack, wherein data packets are processed on an upper protocol layer; the processing is controlled according to at least one timer of the upper protocol layer; the data packets are forwarded to a lower protocol layer for transmission, the transmission is controlled by the lower protocol layer and performed on a physical layer, the device~~ comprising:

a layered protocol stack, adapted to process data packets on an upper protocol layer and control the processing according to at least one timer provided on the upper protocol layer;

the layered protocol stack further adapted to forward the data packets to a lower protocol layer for transmission and to control the transmission by the lower protocol layer;

the layered protocol stack adapted to facilitate transmission of the data packets by a physical layer that is different from the lower protocol layer;

a means for initiating a transmission with a variable channel access delay caused by a control procedure of the lower protocol layer;

a means for detecting the start of a transmission by the lower protocol layer;

a means for notifying the upper protocol layer by the lower protocol layer when a transmission is started; and

a means for synchronizing at the least one timer of the upper protocol layer according to the notification.

18.　　(Previously Presented) The device of claim 17, comprising at least one of a user equipment and a network node.

19.　　(Previously Presented) The device of claim 17, wherein the at least one timer is adapted to model at least one of a round trip time and a back-off time.

20.   (Previously Presented) The method of claim 1, wherein a notification is sent at the start of a transmission or at the end of a delay.

21.   (Previously Presented) The method of claim 1, wherein a total channel access delay comprises at least two separate components and a notification is sent between the at least two separate components.

22.   (Previously Presented) The method of claim 21, wherein the channel access delay includes a component of arbitrary length and at least one of a notification and a scheduling is performed before the component of arbitrary length.

23.   (Previously Presented) The method of claim 1, wherein a scheduling process is finished immediately before the scheduled data packets are transmitted.

24.   (Previously Presented) The method of claim 1, wherein a notification is a primitive.

25.   (Previously Presented) The method of claim 1, wherein the lower protocol layer is a medium access control sub-layer of a data link layer.

26.   (Previously Presented) The method of claim 1, wherein the upper protocol layer is a radio link control sub-layer of a data link layer.

27.   (Previously Presented) The method of claim 1, wherein the transmission is performed on a channel that can be shared by at least one of a plurality of several users and data flows.

28. – 38.   (Canceled)